



*"We are committed to improving the lives of children now and in the future, in our community and around the world. The new frontier in pediatric care is Fetal Medicine. Fetal Medicine is a game changer that will dramatically improve the health and quality of life of children."*

— Natalia Luis and Cidalia Luis-Akbar

# One Mountain Two Dedicated Sisters Millions of Healthy Babies



Natalia Luis and Cidalia Luis-Akbar are on a mission. One step at a time, these two remarkable women are training to accomplish something truly extraordinary; to reach the summit of Mount Kilimanjaro, the highest free standing mountain in the world.

As they prepare to undertake this arduous journey in November 2014, Natalia and Cidalia are driven by a goal as lofty as the 19,341-foot African peak they seek to reach. Using their effort as a platform to galvanize support, these sisters will raise awareness about the need for earlier, more accurate diagnostics during high-risk pregnancies and help set a new gold standard of care that gives even the most fragile newborns the best chance to survive and thrive as healthy adults.

Now is the time to tap into 21st century technological advancements to profoundly improve how early we can detect potential health issues, how accurately we can extrapolate the implications for newborns, and how effectively we can plan for safe, successful deliveries and post-delivery care.

When these longtime supporters of Children's National Health System bring the "Doctor Bear" flag to the peak of Kilimanjaro, they will be shouting, from the top of the world, their deeply held conviction that all babies deserve a healthy start.

Children's National is privileged to help these two dedicated women achieve their ambitious vision. By raising a minimum of \$500,000 through the 2014 Trek, they will advance the work of our internationally recognized team of physician-scientists and researchers to radically transform newborn intensive care-- harnessing technological breakthroughs to rapidly accelerate treatment and positive outcomes for the most vulnerable patients.

With your generous support, we can reach even greater heights in pediatric medicine. The view from this peak is breathtaking, offering new hope to premature babies, lifesaving treatments to those who come into the world with heart defects or other conditions and enhanced clinical care to halt the future onset of health concerns with origins in fetal development.

# Here's How YOU Can Help!

## Sponsorship Opportunities and Benefits



<b>Uhuru Peak Mt. Kilimanjaro Summit Sponsor (19,340 feet)</b>	<b>\$250,000</b>
<ul style="list-style-type: none"><li>• Legacy Opportunity- Room naming – In the Neonatal Intensive Care Unit or the Fetal Medicine Institute</li><li>• Name recognition as Uhuru Peak Summit Sponsor in all coverage and on apparel throughout the climb</li><li>• Corporate logo on Dr. Bear Summit flag</li><li>• Recognition on the Mt. Kilimanjaro Climb event page, Children's Hospital Foundation website, and through Children's National's social media network</li><li>• Donor contributions received before April 30, 2014 will receive invitations to the opening of the Fetal Medicine Institute in May 2014</li></ul>	
<b>Gilman's Point Sponsor (18,650 feet)</b>	<b>\$100,000</b>
<ul style="list-style-type: none"><li>• Naming of the Quiet Room in the Neonatal Intensive Care Unit</li><li>• Name recognition as Gillman's Point Sponsor in all coverage and on apparel throughout the climb</li><li>• Corporate logo on Dr. Bear Summit flag</li><li>• Recognition on the Mt. Kilimanjaro Climb event page, Children's Hospital Foundation website, and through Children's National's social media network</li><li>• Donor contributions received before April 30, 2014 will receive invitations to the opening of the Fetal Medicine Institute in May 2014</li></ul>	
<b>Barafu Camp Sponsor (15,902 feet)</b>	<b>\$75,000</b>
<ul style="list-style-type: none"><li>• Corporate logo on Dr. Bear Summit flag</li><li>• Recognition on the Mt. Kilimanjaro Climb event page, Children's Hospital Foundation website, and through Children's National's social media network.</li><li>• Name recognition on climbing apparel throughout the climb</li><li>• Donor contributions received before April 30, 2014 will receive invitations to the opening of the Fetal Medicine Institute in May 2014</li></ul>	
<b>Karanga Camp Sponsor (13,500 feet)</b>	<b>\$50,000</b>
<ul style="list-style-type: none"><li>• Recognition on the Mt. Kilimanjaro Climb event page, Children's Hospital Foundation website, and through Children's National's social media network</li><li>• Name recognition on climbing apparel throughout the climb</li><li>• Donor contributions received before April 30, 2014 will receive invitations to the opening of the Fetal Medicine Institute in May 2014</li></ul>	
<b>Lava Tower Sponsor (15,190 feet)</b>	<b>\$25,000</b>
<ul style="list-style-type: none"><li>• Name recognition on climbing apparel throughout the climb</li><li>• Donor contributions received before April 30, 2014 will receive invitations to the opening of the Fetal Medicine Institute in May 2014</li></ul>	

make contributions payable to:

***Children's Hospital Foundation***  
***Memo: "Mount Kilimanjaro Climb"***

For more information, please contact:

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# Blazing a Trail to Advance Newborn Intensive Care



Every year millions of babies are born prematurely or with life-threatening birth defects. Many more are stillborn due to conditions that might be prevented if diagnosed in time. This problem has been unrecognized, and largely misunderstood for far too long, causing physical, emotional and financial trauma for families in the United States and around the world.

Recent technological breakthroughs provide new reason to hope, and Children's National is well-positioned to leverage its considerable scientific expertise to transform the standard of care.

Through the Institute of Fetal and Transitional Medicine, we will empower the best and brightest minds to:

- o create innovative diagnostic tools
- o develop cutting-edge protocols for the safest possible prenatal interventions,
- o facilitate new standards for the highest caliber delivery and neonatal care, and
- o produce educational materials to guide families through an extraordinarily daunting and stressful period in their lives.



The highest priority of the Institute will be to rapidly push forward improvements in diagnostic tools employed during high risk pregnancies. Current diagnostic options provide medical professionals with just a small piece of a vast and complex picture. Heart defects, fetal growth issues, genetic abnormalities, and other problems are typically only identified during abnormal ultrasounds, an approach that has not changed for decades. Having such a limited ability to monitor fetal development endangers the child's future health, as high risk factors during pregnancy often result in abnormal brain development or cause brain injuries during gestation that affect other organs and create a host of later-onset issues.

# Investing in Our Children's Futures

Children's National will use funds raised through Natalia and Cidalia's 2014 Trek to engage bioengineers and bio-computational specialists to develop a holistic "fetal monitoring system," building off existing work spearheaded by Adré Jacques du Plessis, MBChB, Children's National's Chief of Fetal and Transitional Medicine.

With this critically needed technical expertise, our lab will complete the design of revolutionary software that can analyze a broad range of data sources (e.g., traditional ultrasound, fetal brain MRI results, and cutting-edge research on the placenta and its relation to neurodevelopmental hormones and other aspects of fetal development). The transformative diagnostic capacity and real-time monitoring established through this innovative software will be complemented by strategic investments in:

- research (e.g., fetal MRI, placenta), and
- videos and other educational materials for parents, for use in the clinic and at home.
- psycho-social support for families to reduce dangerous levels of stress associated with high risk pregnancy

Sparked by funds raised through the 2014 Trek, Children's National will establish a holistic, one-of-a-kind model, setting a new gold standard of newborn care. The resulting technology and protocols will allow our team, *and ultimately other healthcare providers across the nation and around the world*, to identify distress signals in utero, halt the development of cerebral palsy, spina bifida, and other diseases before they start, and ensure a safe transition for every baby.



Our goal is to overcome the greatest threats to newborns through earlier diagnosis, strategic intervention, and world-class clinical care:

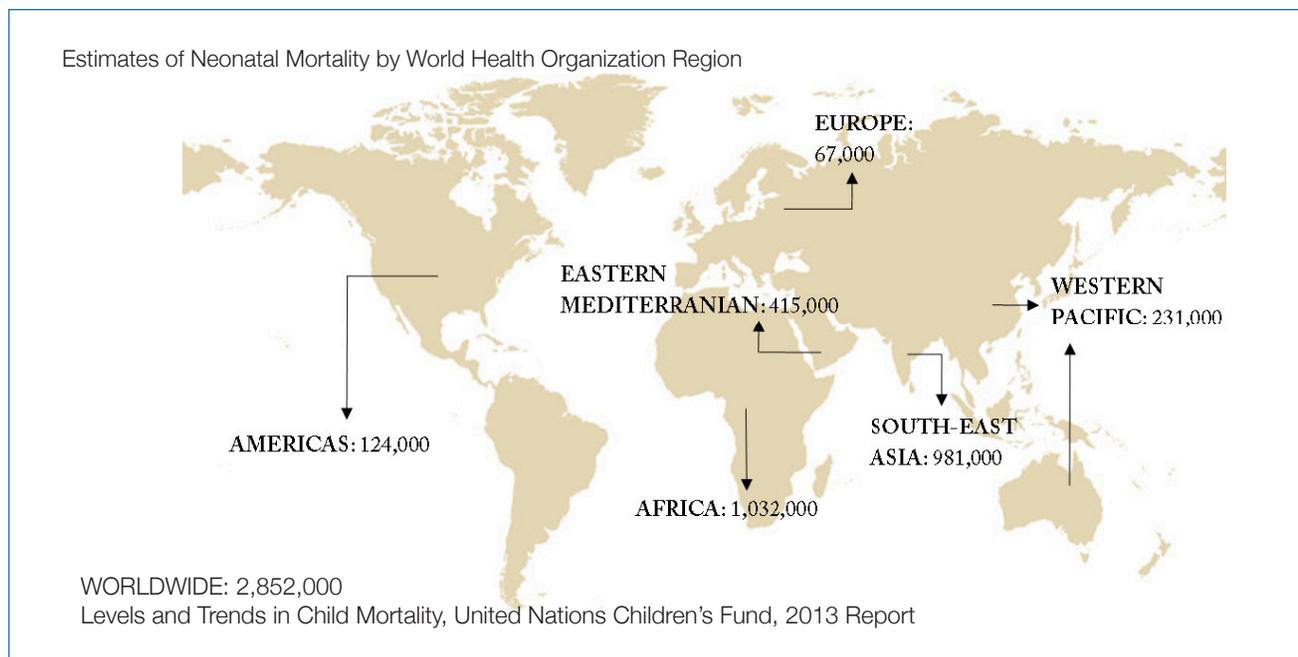
**Prematurity** is the leading killer of America's newborns, and those who survive often face lifelong health problems, including cerebral palsy, chronic lung disease, and other disabilities. More than 500,000 babies are born prematurely in the U.S. each year (1.3 million worldwide), and this number has increased by 36% over the past 25 years.

**Heart defects** are the most common of all birth defects (1 in 125 infants per year) and the leading cause of birth defect-related deaths. For those who survive, there is a major risk of brain injury and subsequent developmental disabilities.

**Fetal growth restriction** is the leading cause of stillbirth worldwide. Each year, 400,000 babies in the U.S. are born below the expected weight. (Of these, 12,000 are due to failure of the placenta to support normal growth.)

**Maternal diabetes** affects up to 400,000 women each year. This serious condition is a major risk factor for death and causes adverse outcomes for surviving infants.

# Making a Global Impact



The Institute for Fetal and Transitional Medicine seeks to find solutions for a truly global health crisis. Neonatal mortality is a worldwide challenge. And, it is especially critical in developing countries, where roughly 44 percent of deaths under the age of five occur in the first 28 days of life.

While our proposed work will initially be designed and tested with patients at Children's National's Washington DC campus, we aim to disseminate the results quickly, far beyond our hospital's walls. Once the new diagnostic software is finalized, other medical facilities will have access to the technology, and our experts will be able to provide personalized consults and training through our established telemedicine program, which currently has 100 hospital and university partners in 14 countries.

Sharing these advancements, is among Natalia and Cidalia's highest priorities. In selecting Children's National, they have found a research partner with a strong track record of creating ground-breaking techniques that are being successfully reproduced on an *international scale*. For example, Children's National is leading the global implementation of a new, non-invasive way to test newborns for congenital heart disease. To date, 12 countries have implemented pulse oximetry screening, which has detected this condition and sparked lifesaving treatments. We have already received hundreds of requests for education on implementing this new technique from around the globe.

## A Quantum Leap Forward for Newborns at Risk

This is the future of medicine. Children's National invites you to join Natalia, Cidalia, and our doctors, nurses, and researchers as we seek to reach new heights in the care of our most vulnerable patients. Together, we can ensure that the future of newborn intensive care begins today. Harnessing our expertise, creativity, and technology could ensure that every baby has the chance for a normal, healthy life. Your charitable contribution to sponsor the 2014 Trek will propel these dedicated sisters, and this vital work, forward at a critical moment. Thank you for your consideration.

## André Jacques du Plessis, MBChB



Chief of Fetal and Transitional Medicine  
Professor of Pediatrics at George Washington University  
School of Medicine and Health Sciences

Dr. du Plessis' research and clinical activities are focused on mechanisms of injury to the immature brain in high risk populations including the fetus and infant with congenital heart disease, infants born prematurely, and infants exposed to perinatal asphyxia. He has developed techniques for evaluating continuous cerebral blood flow and metabolism at the bedside of high-risk infants using primarily near infrared spectroscopy. He has received NIH funding for his research since 1994 and has mentored trainees from multiple disciplines with philanthropic and more recently NIH (K24) support. A number of these trainees have achieved independent research funding and leadership positions in large academic centers around the world. Prior to joining Children's National, Dr. du Plessis was the Director of Fetal and Neonatal Neurology at Children's Hospital of Boston, and Associate Professor of Neurology at Harvard Medical School. He developed and directed the first pediatric program dedicated to neurocritical care, as well as the largest program in fetal-neonatal neurology at Children's Hospital in Boston.

## Catherine Limperopoulos, PhD



Director, MRI Research of the Developing Brain  
Director, Advanced Pediatric Brain Imaging Research Laboratory

A pioneer in the emerging field of fetology, Dr. Limperopoulos joined Children's National in 2010. Dr. Limperopoulos' research activities focus on studying the causes and consequences of early life brain injury in high-risk fetal, preterm, and full-term infants. Central to her research is the application of advanced magnetic resonance imaging (MRI) techniques to understand the timing and evolution of brain injury as well as the brain's adaptive response following injury. The long-term goals of her research program are to guide medical and rehabilitation interventions aimed at preventing brain injury and minimizing long-term developmental disability. She is the leading authority on imaging (MRI) fetal brain growth among children with congenital heart disease and is a prominent speaker featured at national meetings. She earned her Bachelor of Science degree in Occupational Therapy, her master's degree in Rehabilitation Science, and her PhD in Rehabilitation Science from McGill University in Montreal, Canada. She was a research fellow in fetal-neonatal neurology at Children's Hospital in Boston, Massachusetts and Harvard Medical School. Dr. Limperopoulos is Associate Professor of Pediatrics at George Washington University School of Medicine and Health Sciences. Prior to joining Children's National, she was the Canada Research Chair in Brain and Development at McGill University and directed the Fetal-Neonatal MRI Research Program at the Montreal Children's Hospital.

## About Children's National Health System

Children's National is the preeminent pediatric medical facility serving the Washington, DC metropolitan region. Founded in 1870 with the goal of treating orphans and children of Civil War soldiers, the hospital has grown from a 12-bed row house to a 303-bed, nationally ranked facility with more than 360,000 patient visits each year. Recent recognition includes:



- Ranking among the top pediatric hospitals by U.S. News & World Report. For the third year, we were listed among the best U.S. pediatric institutions in all 10 ranked specialties.
- Being named as one of The Leapfrog Group's 2012 Top Hospitals. We are one of only twelve children's hospitals in the country named to this list, based on results from the Leapfrog Hospital Quality and Safety Survey.

Under Chief Executive Officer Kurt Newman, MD, Children's National is re-imagining how we care for children. We are thinking bigger and differently by proactively addressing new challenges and ensuring that research is integrated into everything we do. We are working to advance innovations in treatments, drugs, and technology. Most importantly, we are charged to never forget who we are caring for—everything we do, every decision and investment we make, is for the children we treat.